

than during the wet season. I have not seen its nests or any signs of its breeding in my study areas.

Seasonal movements in nectar-and fruit eating birds have been recorded in literature. It may be interesting to investigate such movements in order to understand the habitat requirements of these specialized species for conservation planning.

18. VARIATIONS IN OLIVEBACKED SUNBIRDS *NECTARINIA JUGULARIS* (LINNAEUS) OF ANDAMAN, CAR, CENTRAL AND GREAT NICOBAR ISLAND

While cataloguing the sunbirds in the BNHS Collection (Catalogue Part 37), I had noticed the differences among birds within the same race of the species *Nectarinia jugularis*, collected from different islands of the Andamans and Nicobars. I critically studied the 32 specimens of *N. jugularis* innumerable times, arranging them island-wise, and each time noticed the variations among them. The 25 subspecies of *N. jugularis*, listed in the checklist of the birds of the world (A complete checklist of the Birds of the World, Richard Howard and Alick Moore 1980, Oxford University Press) are distributed mainly on the islands of south and southeast Asia, from the Andamans, Malaysia, Singapore, Sumatra, Java, Borneo, Philippines, Sula Is., Kei Is., New Guinea to the Solomon Islands east of New Guinea (The Reader's Digest Great World Atlas, 1981, p. 94-95). Out of the 25 subspecies, 3 are in the Indian list, found in the various islands of Andamans and Nicobars.

The 19 islands comprising Nicobars are more widely dispersed than the 204 in Andamans, hence chances of geographic isolation or the formation of races are more in the Nicobars.

Nectarinia jugularis andamanica (Hume) (Andaman group)

We have specimens both from Andaman (n=6) and Narcondam (n=6), an island 128 km from

ACKNOWLEDGEMENTS

These observations were made during the course of my research on the ecology of woodpeckers, supported by WCS/The New York Zoological Society, N.Y., U.S.A.

January 31, 1995

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Andaman towards Tavoi, Myanmar. Narcondam birds are slightly, but consistently larger in their wing and tail measurements: male wing 56-60 mm (53-55 in Andaman birds), tail 33-34 mm (30-31 in Andaman). The pectoral tufts are brighter in the Andaman birds. In the absence of any other major difference, Narcondam birds are grouped with the Andaman birds under the same subspecies.

Nectarinia jugularis klossi (Richmond) (Great Nicobar)

There are two groups of specimens of this subspecies, one from Campbell Bay in Great Nicobar (n=4) and the other (n=6) from islands to the north, and below Car Nicobar (*proselia*). There is almost no difference in wing and tail sizes between these two groups, but birds from Great Nicobar have a larger bill (20.5 mm) than those from Trinkut and Nancowry (16.5 - 18 mm). The pectoral tufts in the northern birds are almost as bright as those in *proselia*, whereas in the southern Campbell Bay birds, they are duller. With a larger series of birds it may be possible to separate these two groups into races. We do not have access to the topotypes of Baker's *blanfordi* from Kondol Island, which is treated as a synonym of *klossi*, but it is possible that a comparison of skins from Great Nicobar with those from Kondol Island may show reasons for their separation.

Nectarinia jugularis proselia (Oberholser)
(Car Nicobar)

They are like *klossi* but definitely with a shorter bill and very distinctly bright orange-yellow pectoral tufts.

Sálim Ali and Ripley (HANDBOOK Vol. 10, pp. 30-33, 1974) have placed the three forms from the Andaman, Car Nicobar and Nicobar Islands as subspecies of *Nectarinia jugularis*. Baker (FAUNA Vol. 3, pp. 401-404, 1926) considered the birds from Andamans (*andamanica*) to be quite different from those in other islands (of the same group) and placed it in a separate species, *Leptoconia flammixillaris* together with birds from Myanmar (Burma), with whom they have greater affinity, as the nominate race. This is a more correct classification, considering the fact that these birds (Andaman) have a very large bill, the males have a non-breeding (eclipse) plumage (no. 22119 from Wrightmyo in our collection) as in *asiatica*, and a brown band just below the metallic throat and breast of the breeding male. The abdomen is pale yellow, while in others it is very bright yellow. The pectoral tufts are yellow in *andamanica* contrary to the bright orange in the other two subspecies. The forehead is plain light brown whereas it is glossy metallic in *proselia* and *klossi*. The only specimen we have of the *flammixillaris* is a breeding male from Ingabu, Henzada Dt., Myanmar (Burma), dated 8.1.1931. The bright orange and black breast band has faded into light orange and dark brown. Specimens of *andamanica* resemble this bird in every

respect but lack the orange and black (brown) breast band, instead of which there is a brown one. The pectoral tuft is bright orange and yellow in *flammixillaris* whereas it is yellow, with no orange in *andamanica*. Baker mentions the presence of an eclipse plumage in *flammixillaris* also.

Speciation is an extremely slow process. According to Mayr (1942, Systematics and the origin of species), birds with their highly uniform internal environment exhibit a minimum of changeability through external causes. The variation of the phenotype in birds is exceedingly narrow. Or it may be that the environment in the different islands are similar and hence the evolution has taken up almost the same pattern, without any drastic difference. Still the difference in the sizes of the bills of the birds from various islands and the small differences in the colour of the pectoral tufts are noteworthy. It was formerly believed that insular forms are invariably smaller than the mainland forms, this is by no means true. The only generalization we can make is that island forms are often different in size from the other population of the species.

I am indebted to Mr Humayun Abdulali for the discussions I had with him and for correcting an earlier manuscript.

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19. SIGHT RECORD OF GREEN MUNIA *AMANDAVA FORMOSA* IN THE DESERT NATIONAL PARK, JAISALMER, RAJASTHAN

The Green Munia *Amandava formosa* (Latham) is a rare endemic species, very locally and unevenly distributed, mainly in Central India from Mount Abu, Gwalior, Jhansi, Surguja south to Mahableshwar, Utnur (Adilabad) and Visakhapatnam Ghats (Ali and Ripley 1983). Stray records are reported from Lucknow (Reid 1881), Bihar and Lahore (Currie 1916a, b). Currie (1916a,

b) found a small breeding colony consisting of 4-5 nests in August 1914 in some ornamental trees in the municipal gardens in Lahore, which H. Whistler presumed were escaped cage birds (Roberts 1991). There has been no record since then, so Roberts (1992) has excluded it from the checklist of Pakistan.

On 24 July 1993, I saw an individual sitting